

1106-L1-2000 **Harrison E. Stalvey*** (hstalvey1@gsu.edu) and **Draga Vidakovic** (dvidakovic@gsu.edu).
Students' Reasoning When Sketching Graphs of Plane Curves Defined Parametrically.

This report is on a portion of an investigation of fifteen second-semester calculus students' understanding of the concept of parametric function. While a substantial amount of research exists on students' general understanding of the concept of function, very little is known about how students reason about parametric functions. Here, our focus will be on how students reason when sketching graphs of plane curves defined parametrically. Employing APOS theory as our theoretical perspective, we will present examples that illustrate students' action and process levels of understanding of parametric functions when sketching the graph of a particular curve. We will conclude with implications for teaching and propose possible avenues for future research on the topic of sketching graphs of curves defined parametrically. (Received September 15, 2014)